REMARKS

This Amendment responds to the Office Action dated September 30, 2005 in which the Examiner rejected claims 1-5, 11-16 and 20 under 35 U.S.C. §103.

Applicants respectfully request the Examiner acknowledge the priority document filed August 9, 2004.

As indicated above, claims 1, 11-13 and 20 have been cancelled without prejudice, claim 2 has been amended for stylistic reasons and claims 3-5 and 14-16 have been amended to depend from claim 2 and to correspond thereto. The amendments are unrelated to a statutory requirement for patentability and do not narrow the literal scope of the claims.

Claims 1-5, 11-16 and 20 were rejected under 35 U.S.C. §103 as being unpatentable over *Matsumoto et al.* (U.S. Patent No. 6,856,064) in view of *Shen et al.* (U.S. Publication No. 2003/0127938) and *Hasegawa et al.* (U.S. Patent No. 6,566,778).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

Masumoto et al. appears to disclose a stator iron core of the electric motor and a method for manufacturing the stator iron core of the electric motor. (col. 1, lines 12-14). In FIG. 1, a reference numeral 1 shows a plate-shaped core segment (magnetic pole segment) made of magnetic material, and a reference numeral 9 shows a connection portion

(also called as a joint portion) consisting of a concave portion 3a and a convex portion 3b provided to both surfaces of one end of the magnetic pole segment 3 as a connection means. 4 shows the first iron core member in which plural magnetic pole segments 3 are aligned via an end face 3c and an end face 3d of each segment. A reference numeral 5 shows the second iron core member in which plural magnetic pole segments 3 are aligned, and the second iron core member and the first iron core member are stacked or laminated alternately. The concave portion 3a of a certain magnetic pole segment 3 is engaged with the convex portion 3b of an adjoining magnetic pole segment so that the magnetic pole segments 3 are connected so as to turn freely around a center of the concave portion 3a and the convex portion 3b. A reference numeral 7 shows an iron core which is circularly formed by turning the concave portion 3a and the convex portion 3b of the connection portion 9 of each magnetic pole segment 3 made by laminating both iron core members. A reference numeral 3e shows a back yoke portion of the magnetic pole segment 3, and 3f shows a teeth portion. 2 shows a slot formed by the back yoke portion 3e and the teeth portion 3f, and 2a shows a bottom portion of the slot. The bottom portion 2a of the slot is constituted by the back yoke portions 3e of the first iron core member 4 and the second iron core member 5. The bottom portion 2a has a curved line and does not have a fine angle. (col. 6, lines 5-34)

Thus, *Masumoto et al.* merely disclose teeth portion 3f extending in a radial direction. Thus nothing in *Masumoto et al.* shows, teaches or suggests a) each tooth extending from a coreback in a direction parallel with an axial direction of the coreback and b) an axial flow electrical machine as claimed in claim 2. Rather,

Masumoto et al. teaches away from the claimed invention and merely discloses a radial flow electrical machine having teeth extending in a radial direction.

Shen et al. appears to disclose [0002] a rotating electrical machine with a rotor and a stator, and to a method of manufacturing such a rotating electrical machine. [0043] Referring now to the figures of the drawing in detail and first, particularly, to FIG. 1 thereof, there is shown a rotating electrical machine 1, i.e., a dynamoelectric machine, with a rotor 2 and a stator 3. As the vertical section shows, the rotor 2 is arranged within the stator 3. The dimensions of the rotor 2 are selected in such a way that a small air gap 4 remains between it and the stator 3. A non-illustrated shaft of the rotating electrical machine is aligned along the longitudinal axis of the rotor 2. The rotor 2 and the stator 3 are wound from specially shaped strips 5 and 6, as represented in FIGS. 2, 3, 6 and 7 and explained in the associated descriptions. A core 3K and a yoke 3J of the stator 3 form a unit. [0052] FIGS. 7 and 8 show the partial region, of a strip 6, which is used for winding the rotor 2. The strip 6 is subdivided into segments 61. Each segment 61 is matched to the inner and the outer radius of curvature of the rotor 2. The segments 61 are all the same size. As is represented in FIGS. 7 and 8, each segment 61 is provided with two or three slots 62, depending on whether the split line is guided centrally between two slots 62 or through a slot 62. In the embodiment example represented here, the slots 62 have an oval configuration, are all the same size, are closed towards the outside and are separated from one another by protrusions 63. If the segments 61

are configured in such a way that the split line is guided centrally through between two segments 61 then, as is represented in FIG. 8, the end of the split lines 64 located at the inside opens into a circular recess 66, which is used to reduce the mechanical deformation when winding the rotor 2.

Thus, *Shen et al.* similarly is directed to a radial flow electrical machine in which the teeth are formed by strips. Nothing in *Shen et al.* shows, teaches or suggests a) each tooth extending from a coreback in a direction parallel with an axial direction of a coreback and b) an axial flow electrical machine as claimed in claim 2. Rather, *Shen et al.* teaches away from the claimed invention and discloses a radial flow machine having teeth which extend radially.

Additionally, the teeth in *Shen* are integrally formed with the strip. However, as claimed in claim 2, the core comprises a coreback and a plurality of (separately formed) teeth.

Finally, *Shen et al.* merely discloses slots for receiving the stator windings. Thus nothing in *Shen* shows, teaches or suggests a plurality of teeth arranged in tooth openings as claimed in claim 2. Rather, *Shen* merely discloses slots for receiving stator windings and not for receiving teeth.

Hasegawa et al. appears to disclose a cage-type induction motor that is appropriate for and used for high rotational speeds. (col. 1, lines 8-10). In FIGS. 2, 3A, 3B and 3C, the high-speed cage-type induction motor is provided with a stator 20 for generating a rotating magnetic field and a rotor 10 that rotates. (col. 4, lines 60-63). In detail as shown in FIG. 3A, each stator sheet 22 is composed of an inner ring portion 22a, an outer ring portion 22b and a plurality (12 in this example) of teeth portions 22c. The inner ring portion 22a and outer ring portion 22b are circular in

shape with the inner and outer peripheries closed, respectively, and between the inner and outer peripheries, a plurality (12 in this example) of slots 23 are constructed. Each tooth portion 22c extends radially between adjacent slots 23, and the inner end thereof is joined to the inner ring portion 22a, and the outer end is connected to the outer ring portion 22b, thereby magnetically connecting both portions. The stator winding 24 is installed in the slots 23. More explicitly, for instance, either the inner ring portion 22a or the outer ring portion 22b is fabricated separately in advance, the fixed winding 24 passes through the slots 23 only at the teeth portions 22c, and after completing the installation of the winding, the outer ring portion 22b or the inner ring portion 22a is joined by welding etc. to the other portion. (col. 5, lines 15-34)

Thus, *Hasegawa et al.* similarly is directed to a radial flow electrical machine in which each tooth portion 22c extends radially between adjacent slots. Nothing in *Hasegawa et al.* shows, teaches or suggest a) each tooth extending from the coreback in a direction essentially parallel with an axial direction of the coreback and b) an axial flow electric machine as claimed in claim 2. Rather, *Hasegawa et al.* teaches away from the claimed invention and discloses a radial flow electric machine having teeth that extend radially.

Since neither *Masumoto et al.*, *Shen et al.* or *Hasegawa et al.* show, teach or suggest an axial flow electric machine having each tooth extend in an axial direction of the coreback as claimed in claim 2, Applicants respectfully request the Examiner withdraws the rejection to claim 2 under 35 U.S.C. §103.

Claims 3-5 and 14-16 depend from claim 2 and recite additional features. Applicants respectfully submit that claims 2-5 and 14-16 would not have been obvious within the meaning of 35 U.S.C. §103 over *Masumotot et al.*, *Shen et al.* and *Hasegawa et al.* at least for the reasons as set forth above. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 3-5 and 14-16 under 35 U.S.C. §103.

The prior art of record, which is not relied upon, is acknowledged. The references taken singularly or in combination do not anticipate or make obvious the claimed invention.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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